

AMENDMENTS TO THE DRAWINGS

Figures 1 and 3-10 are amended to include features described in the patent application and to add reference numbers to elements shown in the figures.

Attachment: Replacement Sheet(s)

REMARKS/ARGUMENTS

In response to the Office Action mailed April 17, 2006, Applicants amend their application and request reconsideration. In this Amendment, claims 1-7 are cancelled leaving claims 8-14 pending. Although the Examiner refused to examine claims 8-14, this refusal was improper, for the reasons discussed below, and at least claims 8, 9, and 14 must now be examined in view of the foregoing amendments and the following remarks.

The Disclosure of the Present Patent Application

The disclosure of a patent application includes every part of the text, including the claims, and the drawings. The terms used in the claims, particularly as amended here, are all explained in the patent application.

What is meant in the present patent application by “open pins” of the connector is defined at the very opening of the description at page 1 of the patent application in lines 15-18. In describing the prior art in that passage, the inventors describe the situation including a connector connected to a printed circuit board. When the connector includes a larger number of pins than the number of signal lines of the printed circuit board, then, obviously, some connector pins are not connected to signal lines. As stated in the patent application at page 1 in lines 17 and 18, “some of the connector pins are left open as open pins where the signal lines are not connected.” Thus, the term “open pins”, with regard to a connector is defined for this patent application.

Further, in describing the invention in the paragraph that begins at page 3, in line 3, the inventors described the connection of first and second printed-circuit boards. The first printed-circuit board includes a first signal line for transmitting a high frequency signal and the second printed-circuit board includes a second signal line “that is connected to the first signal line of the foregoing first printed-circuit board...”. Further, as described in that same paragraph of the patent application, a “connector provided with many pins ... [is] arranged between the first printed-circuit board and the second printed-circuit board *so that the first signal line and the second signal line are connected by the*

pins, and elements for giving loss are connected to open pins where the first signal line and the second signal line of the connector are not connected.” (Emphasis added.)

In addition, Figure 1 of the patent application includes, as described in the paragraph beginning at page 4, line 25 of the patent application, a first signal line of a first printed-circuit board 1 and a second signal line of a second printed-circuit board 2 that are connected by a connector 3. The first and second signal lines are not given reference numbers and may not be shown in the figures filed with the patent application, but those signal lines and their connection through the connector 3 are clearly described in the patent application as filed. That same paragraph likewise describes the presence of connector pins 4-9 of the connector 3 that are open. According to the description at page 1 of the patent application, this designation means that those connector pins are not connected to signal lines. The paragraph that begins at page 4, in line 25 of the patent application, further describes terminating resistances 10 and shows, in Figures 1 and 3-10, black lines extending from those terminating resistors 10 to open pins 4-9 of the connector 3. Even a person with the most rudimentary understanding of electricity recognizes that those black lines in those figures indicate electrical conductors that must be present in order to connect the terminating resistors 10 to the open connector pins 4-9. Without those interconnections, the disclosure of the patent application would not make sense to the person of ordinary skill in the art reading the disclosure. In fact, the interconnections are so apparent to such a reader of ordinary skill in the art that their express description is not necessary.

The Drawing Amendments

In this Amendment Figures 1 and 3-10 are amended. No new matter is introduced by these amendments. These amendments show and provide reference numbers for the first signal line and the second signal line that are described in the patent application at page 4, lines 25 and 26, and the interconnection of those first and second signal lines through a pin of the connector as described at page 3, lines 8-12 of the patent application. Since these elements were described in the originally filed patent application, no new matter is added by depicting these elements in the figures.

Figures 1 and 3-10 are also amended to include reference numbers for the conducting lines that connect the lossy elements to open pins of the connector 3. These elements are shown in the patent application as filed and their function is clear to one of skill in the art from the original description. Accordingly, adding reference numbers identifying these elements does not add any new matter to the patent application.

The Specification Amendments

The specification is amended, entirely within the scope of the original disclosure, merely to mention the conducting lines that were present in Figures 1 and 3-10 as filed and that are now given reference numbers. Likewise, the signal lines that are mentioned in the patent application are given reference numbers in the amendments to the specification. Again, no new matter is added by merely identifying what was disclosed in the patent application as filed.

The Claim Amendments and Species Election Requirement

In the previous Response, the basis for each of claims 8-14, claims that were added to the patent application, with reference to the figures was supplied. That basis for the claims still applies and is incorporated by reference without verbatim repetition. The apparent confusion of the Examiner and the erroneous withdrawal from consideration of all of claims 8-14 was perhaps based upon an absence of exact congruence between the language of those added claims 8-14 and the language of the specification. It is well established that in U.S. patent practice there is no requirement of verbatim agreement between claims of a patent application and the specification. Rather, what is important is a clear understanding and expression in the claims of what is disclosed in the patent application as filed.

Giving consideration to the numerous comments from the Examiner, appropriate amendments have been to the claims to establish a verbatim agreement between the claim language and the language of the specification of the patent application. Perhaps the term “open conductor” should not have been chosen to describe a conductor providing a connection to an “open pin” of the connector. In any event, that language no longer

appears in the claims. The claims use the term “open pins” only in relation to the pins of the connector that are connected to lossy elements. Further, the interconnection through a pin, not an open pin, of the connector of the signal lines of the first and second printed-circuit boards is made clearer. In view of these claim clarifications, it is clearly apparent that claims 8, 9, and 14 read upon the previously elected alleged species of Figures 1 and 2. Accordingly, those claims must now be examined. If a decision is made not to examine any pending claim, Applicants will be required to seek supervisory review by way of petition.

Upon allowance of claim 8, the Examiner must rejoin to the prosecution claims 10-13 because claim 8 is a generic claim. For that reason, all pending claims have been amended for consistency and to permit such an allowance without further delay with regard to issues of form.

The Objections and Rejections as to Form

The objections to the drawings only related to claims that are now cancelled. Thus, the rejection is moot. Applicants note the Examiner’s continuing reference to paragraphs of the present patent application in the published form of the patent application. A patent application is examined as filed, not as published, because of the potential for amendments during prosecution. Thus, as is proper, the foregoing amendments and these comments all refer to the patent application as filed, not to any paragraph numbers relating to the patent application as published.

Applicants have given attention to the objections to the drawings with regard to the language of claims 1 and 2. In view of the foregoing amendments of the drawings and the specification, those drawing objections cannot be made with respect to the application as now pending and with respect to any of claims 8-14.

The objection with respect to claim 1 is moot in view of the cancellation of that claim. The questioned language does not appear in any of claims 8-14.

The rejection of claims 1-3 and 7 pursuant to 35 USC 112, second paragraph, is moot in view of the cancellation of those claims. Nevertheless, careful attention has been given to this rejection. The rejection has been responded to in this Amendment by the

changes to the drawings and specification described above without the addition of any new matter.

The Prior Art Rejection

Claims 1-3 and 7 were rejected as anticipated by Jones (U.S. Patent 5,734,208). This rejection, which was repeated verbatim from the first Office Action, is respectfully traversed as to claims 8-14 for the same reasons already presented in responding to the first Office Action and the rejection of claims 1-3 and 7.

What is described in Jones is quite different from what is described in the present patent application. To be sure, Jones concerns an assembly that includes two printed circuit boards and a connector that provides electrical connections between conductors on the first and second printed-circuit boards. Jones is concerned with detecting whether the second printed-circuit board is connected to the first printed-circuit board. In order to provide detection of the presence of the second printed-circuit board, the circuit board 30 of the examples in Jones includes a short circuit 36 between two of the terminals of the printed-circuit board 30. Those terminals match respective terminals of the connector 22a that are connected to a transistor 44.

The signal line of particular importance to Jones is the signal line 20. Jones desires that signal line be properly terminated no matter whether the circuit board 30 is connected to the connector 22a or disconnected from that connector. When the circuit-board 30 is absent so that the pins 24a and 24b of the connector 22a are not connected to each other, then, as described at column 3 of Jones, signal line 20 is terminated as an open circuit because the gate of the transistor 44 is biased by the voltage V_{CC} . By contrast, when the printed-circuit board 30 is inserted in the connector 22a so that pins 24a and 24b are short circuited to each other, the potential applied to the gate of the transistor 44 is reduced and the ground voltage V_{SS} appears at the terminal 20 so that the terminal 20 is grounded. In that case, the signal line 38 is connected to the same pin of the connector 22a to which the signal line 20 is connected.

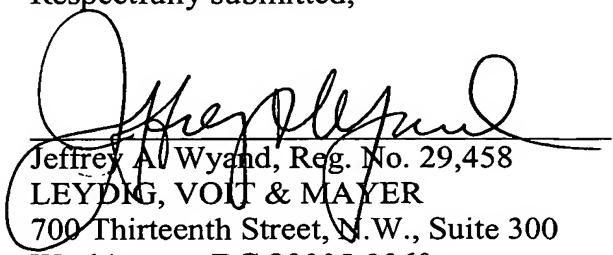
If Jones is applied to the language of claim 8, then the line 38 is a signal line and all of the terminals on the circuit board 30, other than the terminals 34a, 34b, and 34c, are

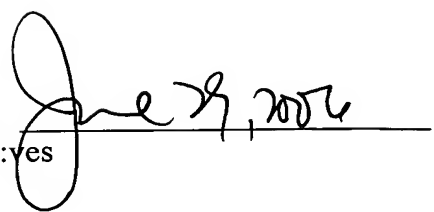
potentially open pins. Clearly, there are no lossy elements connected in any way to any of those open pins. Moreover, the assertion that the resistor 40 is a lossy element, while correct, fails to meet the language of claims 8-14. Those claims require that the lossy elements be connected to open pins. In Jones, the lossy element 40 is connected to a signal line 38 which, by definition, according to the present patent application and claims, is not an open pin of the connector 22a. It would appear that the language of the former claims may have led to some confusion and misinterpretation. This conclusion is also supported by the reference in the Office Action to element "41" as a lossy element. There is no element 41 in Jones although circuits 41' and 41" are present. Each of those circuits includes a resistor but the circuits themselves cannot be considered lossy elements. Moreover, these lossy elements are not connected to open pins when the printed-circuit board 30 is inserted in the connector 22a.

To summarize, Jones does not describe an arrangement in which, as in claim 8, lossy elements are connected to open pins of a connector. Therefore, on that basis and for the other reasons stated above, there can be no anticipation of any pending claim by Jones.

Reconsideration, examination of at least claims 8, 9, and 14, and allowance of all of claims 8-14 are earnestly solicited.

Respectfully submitted,


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Date: 
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